SECTION II: SITE IDENTIFICATION

What does asbestos manufacturing waste look like?

Asbestos cannot be positively identified without microscopic analysis by a qualified laboratory technician. However, the trained naked eye can spot materials on the surface of, or in soil, that have a high probability of being asbestos.

Generally speaking, asbestos manufacturing waste exists in the following forms:

- Pellets;
- Spheres;
- Whole sheets;
- "Plate waste" (sheet scraps/fragments);
- Rolled sheets;
- Dewatered sludge; and
- "Baghouse" (dust collector) waste.

Asbestos manufacturing waste comes in a variety of colors, including gray, white, black, green, and red. After being in the soil for many years, it has a tendency to blend with its surroundings and becomes hard to distinguish from the natural soils. This is most often the case with "baghouse" waste, which is a fine, dust-like material which resembles soil particles.

However, the naked eye, trained by experience, can often detect the presence of asbestos manufacturing waste by also studying the physical characteristics of a site, including the vegetation and terrain. Based on experience, the following site features are considered key "indicators" for locating buried asbestos waste in areas of known dumping:

- Topographic features indicating that the site has been filled;
- Debris, typically in the form of pellets, spheres and/or plate waste, located on or near the surface of the ground, or protruding from steep banks or extending into surface waters and wetlands;
- Scant vegetation and/or vegetation consisting of moss, sumac trees, poison ivy, and/or pricker bushes;
- Hummocks along a forest floor, often in a grid-like or symmetrical pattern; and
- Refuse/solid waste items, such as glass bottles, cans and other household items.

The photographs presented on the following pages depict some of the many types, colors and forms of asbestos manufacturing waste dumped in the Nashua / Hudson area. Photographs #1 - 16 were taken by the U.S. Environmental Protection Agency during the 1980's while undertaking site remedial work in the area. The remaining photographs, taken by NHDES, were taken more recently in the Nashua/Hudson area. By studying these photographs, the reader can begin to understand how to recognize asbestos manufacturing waste.

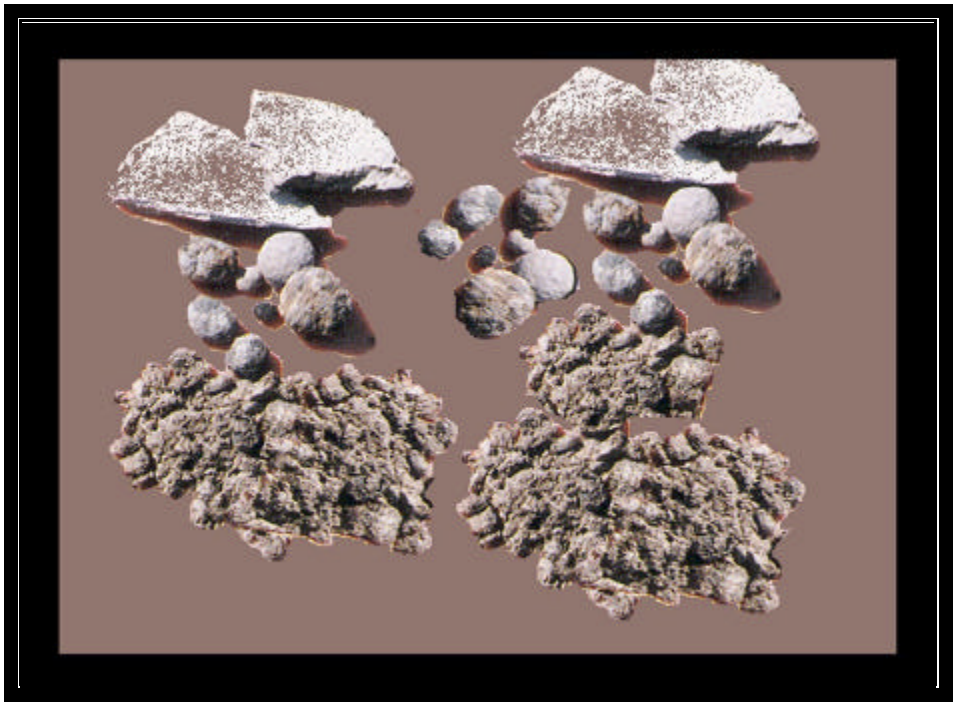

FIGURE 1. Small solid objects having an unnatural appearance such as spheres, pellets or thin gray irregularly shaped material.

FIGURE 2. Buried uniformly shaped solid objects ½ to 1 inch in diameter, resembling stones. May be asbestos and could indicate the presence of larger quantities of the waste material. See Figure #1 for close up.

FIGURE 3. Protrusions of thin (1/4") irregularly shaped material from the soil may indicate that asbestos waste is buried below the surface. Round object in lower right is 2" diameter.

FIGURE 4. Areas of no or poor vegetation growth, with gray or colored areas of soft material which looks different than natural soil, should be suspect.

FIGURE 5. Very dark or black "soil" sometimes associated with moss growth should be analyzed for possible asbestos presence.

FIGURE 6. Piles or pieces of gray or colored sheets, usually 1/4" to ½" thick, either alone or with soft "soil," may possibly be asbestos.

FIGURE 7. Piles of black, gray, or green material that is soft or spongy to the touch, either alone or with pieces of gray sheets should not be dug in or walked on until tested for asbestos.

FIGURE 8. Gray or green deposits that have an unnatural soil appearance, usually void of grass, should be suspect.

FIGURE 9. Areas of woodland having poor growth and a flat surface, containing fragments or pieces of gray or green sheets may indicate an asbestos disposal site.

FIGURE 10. Deposits of thin sheet fragments sticking out of, or lying on the ground. See Figure #13.

FIGURE 11. Small cylindrical shaped pellets, 1/4 inch in diameter.

FIGURE 12. Piles of gray or colored sheets on the ground, or found buried in the ground.

FIGURE 13. Sheet pieces sticking out of black or very dark "soil" with little or no grass growth.

FIGURE 14. Light gray dust on black, damp soil or lighter dry soil. Note presence of green fragments and light balls. All are asbestos.

FIGURE 15. Green and gray, soft or spongy material. Piles of sheet fragments. All are asbestos.

FIGURE 16. Very dark or black “soil” that turns light gray when dry. Fragments in lower right. All are asbestos.

FIGURE 17. Plate scrap mixed with friable baghouse waste, used as fill beneath paved driveway.

FIGURE 18. Plate scrap mixed with friable baghouse waste buried beneath a few inches of soil in a residential yard. Note red, blue, white and gray colors.

FIGURE 19. Red and gray sheet waste and plate waste, mixed with black baghouse waste (near top of photo).

FIGURE 20. Excavation showing friable asbestos waste (red, white & black) and plate scrap.

Are all forms of asbestos waste considered a health hazard?

Yes. But the degree of risk will vary, depending on the potential for the material to release fibers. Generally speaking, asbestos-containing materials are classified as either "friable" or "non-friable":

- The term "friable" indicates the material can be crushed, pulverized, or reduced to powder, when dry, by hand pressure.

- The term "non-friable" indicates the material can not be crushed or pulverized under hand pressure.

Friable asbestos-containing materials pose a greater risk of exposure than do non-friable asbestos-containing materials. However, even non-friable asbestos-containing materials require careful handling and proper disposal. Non-friable asbestos-containing materials, when left exposed to the elements, will deteriorate and become friable over time. In addition, based on observed dumping patterns in Nashua and Hudson, it appears that the waste was often dumped in mixed loads, including both friable (e.g., baghouse waste, dewatered sludge, etc.) and non-friable (e.g., pellets, plate waste, etc.) asbestos-containing material. Therefore, it is prudent to assume that the presence of non-friable asbestos waste is indicative of the presence of friable asbestos waste, even though the friable material may not be visually apparent.

What should I do if I locate a site with asbestos manufacturing waste?

Contact the New Hampshire Department of Environmental Services (NHDES) or your local health officer. See Section V for contact information.

See also "Best Management Practices for Covered Asbestos Waste Sites" in Section IV of this document, specifically BMP 4.0 (Imminent Hazard Response) and BMP 5.0 (Unplanned Encounters).

What should I do if I think I have been exposed to asbestos?

Contact your physician for a baseline physical and professional advice. Also, be advised that smoking, combined with asbestos exposure, substantially increases your risk of developing respiratory illness.